



# YUANTAI CRANE

## Electric Single Girder Crane Specification



- Simple and reasonable structure, high rigidity.
- Good craftwork, convenient manufacturing, Strong versatility.
- Small size, work class is not very high.
- It has constant speed and variable frequency speed regulation, stable travelling.
- User can choose according to different requirements.

## ■ Part 1 Introduction

### ◆ Overview

- (1) Simple and reasonable structure, high rigidity
- (2) Good craftwork, convenient manufacturing, Strong versatility
- (3) Small size, work class is not very high
- (4) It has constant speed and variable frequency speed regulation, stable travelling
- (5) User can choose according to different requirements.



### ◆ Supply scope

Yuantai supply the single girder crane with lifting capacity: 1~20t, span:7.5~28.5m, lifting height 1~30m, low work class A3,A4. We also design and manufacture the nonstandard crane according users' demanding.

### ◆ Main Application

- (1) Designed and made according to JB/T 1306 Electric Single-girder Crane
- (2) The matched electric hoists have CD1 model, MD1 model, etc.
- (3) It is a light & small lifting equipment with running on rail
- (4) Hoisting goods in the factory, warehouse, stockyard
- (5) Banned to use in such dangerous environment as easily combustible,explosive,etc

### ◆ Working atmosphere and condition

This crane is used in ambient temperature of  $-25^{\circ}\text{C} \sim +40^{\circ}\text{C}$ , humidity  $\leq 85\%$ , elevation under 1000m, power supply is 3-ph, 380V,50HZ(can change as user demand).

### ◆ Classification and product specifications

Single speed lifting single-girder crane and double speed lifting single-girder crane.

Tag: if a single speed lifting single-girder crane has lifting capacity 5t, span 10.5m, it can be written as LD5t-10.5m.

### ◆ Main Structure and Feature

It mainly has three parts: mechanism part, (metal structure and crane travelling parts), electric hoist(lifting mechanism), electrical equipments(safe protection, operation).

## ■ Main Structure and Features

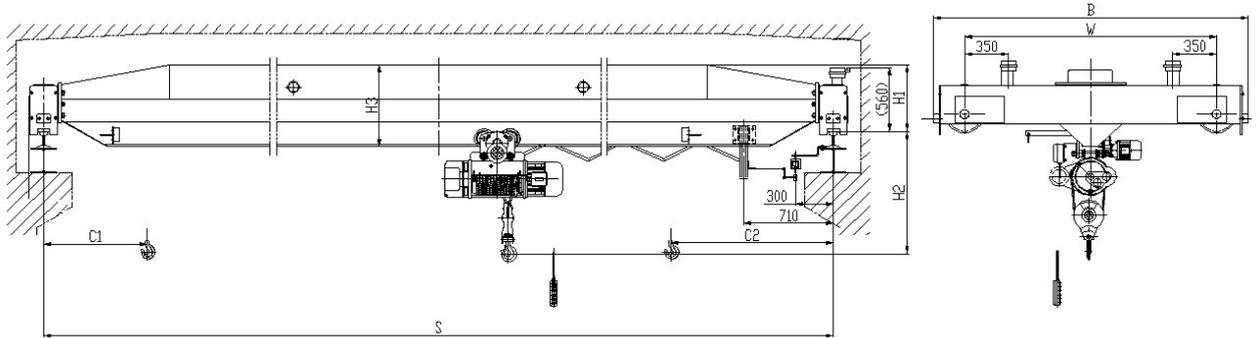
- 1.Single girder, made by the high quality I steel and high quality U-shaped slot into composition
- 2.Material Q235B or Q345B(similar as Fe37 or Fe52)
- 3.End girder is welded with rectangular tubes or good steel
- 4.Main girders connected with bolts
- 5.Crane travelling use respective drive
- 6.QS trinity-drive system or traditional drive by motor and reducer
- 7.Assembly and adjustment is rapid, simple
- 8.Compact structure, small and light
- 9.use LD single girder special wheel, light and strong versatility
- 10.Stable travelling, effective brake, long service life



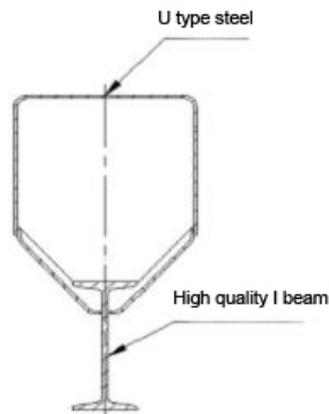


## Part 2 Drawing

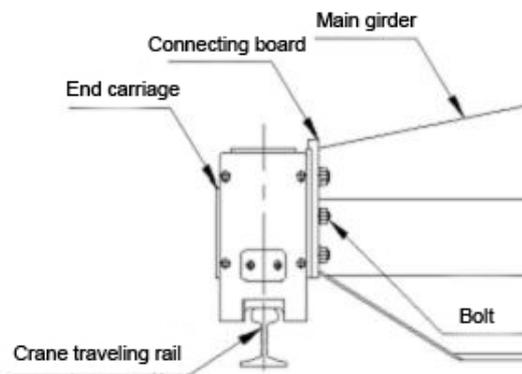
### Overall Organization Drawing



### Girder section drawing



### Connecting drawing between main and end girder



## Part 3 Tech. Parameter

| LD Type Single Girder Electric Crane 1t |      |     |      |      |      |      |      |      |      |
|---|------|-----|------|------|------|------|------|------|------|
| Span                                    | S(m) | 7.5 | 10.5 | 13.5 | 16.5 | 19.5 | 22.5 | 25.5 | 28.5 |

|                |       |     |     |     |     |     |     |     |     |
|----------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|
| Lifting height | m     | 9   | 9   | 9   | 9   | 9   | 9   | 9   | 9   |
| Lifting speed  | m/min | 8   | 8   | 8   | 8   | 8   | 8   | 8   | 8   |
| Trolley speed  | m/min | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  |
| Crane speed    | m/min | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  |
| Lifting motor  | kw    | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Trolley motor  | kw    | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |

|                |    |      |      |      |      |      |      |      |      |
|----------------|----|------|------|------|------|------|------|------|------|
| Total weight   | t  | 1.67 | 1.96 | 2.19 | 2.63 | 3.02 | 3.49 | 4.39 | 5.76 |
| Max Wheel Load | KN | 8.9  | 9.8  | 10.5 | 11.7 | 12.7 | 13.9 | 16.2 | 19.6 |
| Track          |    | P24  |

|                         |    |      |      |      |      |      |      |      |      |
|-------------------------|----|------|------|------|------|------|------|------|------|
| Main dimension          | mm | 7.5  | 10.5 | 13.5 | 16.5 | 19.5 | 22.5 | 25.5 | 28.5 |
| Rail top to main top    | H1 | 490  | 490  | 490  | 490  | 530  | 580  | 660  | 745  |
| Rail top to hook centre | H2 | 910  | 910  | 910  | 955  | 970  | 970  | 990  | 1010 |
| Wheel base              | W  | 2000 | 2000 | 2000 | 2500 | 2500 | 3000 | 3500 | 4000 |
| Crane width             | B  | 2500 | 2500 | 2500 | 3000 | 3000 | 3500 | 4000 | 4500 |
| Hook left limitation    | S1 | 796  | 796  | 796  | 796  | 796  | 796  | 796  | 796  |
| Hook right limitation   | S2 | 1274 | 1274 | 1274 | 1274 | 1274 | 1274 | 1274 | 1274 |
| Main girder height      | H3 | 550  | 550  | 550  | 595  | 650  | 700  | 800  | 900  |

Note: Control mode for ground operation

## Part 4 Easily Damaged Parts

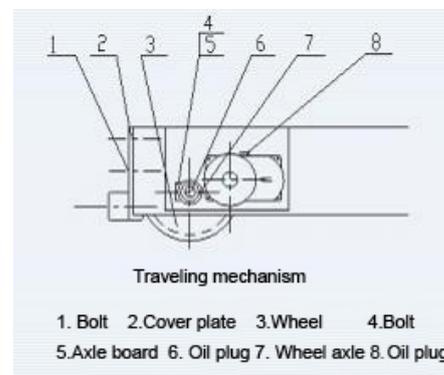
| No. | Name                                 | Material | Remark |
|-----|--------------------------------------|----------|--------|
| 1   | gear wheel axle                      | 20CrMnTi |        |
| 3   | gear ring                            | 40Cr     |        |
| 3   | Initiative wheel                     | 45       |        |
| 4   | Passive wheel                        | 45       |        |
| 5   | Taper brake ring<br>Plane brake ring |          |        |

## Part 5 Usage

- ▶ Test crane: without loading, connect power, inspect all the travelling mechanism and safe device, make them readywitted and accurate, safe and reliable.
- ▶ Adjust travelling and lifting limiter
- ▶ Don't overload
- ▶ Don't lift loading in inclined girder direction
- ▶ Forbidden to use it in fire, bombing, corrosive atmosphere, and can't lift molten metal or toxic, inflammable and explosive objects.

## Part 6 Maintenance

- ▶ Users often need to inspect the crane, especially the connecting between beam end girder and all bolts
- ▶ Lubrication (showing as picture) :
  1. Get out of oil plug 6 and inject albany grease (GB491-1987) to lubricate wheel bearings.  
suggestion: change oil every three monthes, at 1/2~1/3 of the bearing volume.
  2. Get out of oil plug 8 and inject sodium soap grease (GB492/T-1989). Suggestion: change the oil every half year.
  3. Often daub lubricating grease on open gear (GB491-1987) to ensure it oiling.
- ▶ inspect wheel, must no fissure, indentation and excessive wear. If the flaw is 3mm or more, shoule be not used more and replaced by new wheel. Method: loosen bolt 1, take down cover plate2, get down bolt 4 and axle board 5, pull down wheel axle 7, then replace the wheel 3. When installing, reverse the order.





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**Tips:**

You can use the phone dimensional code recognition software to scan the right side of the two-dimensional code, to quickly and easily access our web site for more information.